REMARKS

Claims 14-15, 17-18, 20-26 and 30-37 are pending in this application, claim 16 having been cancelled.

Claims 14-18, 20-26 and 30-37 are rejected.

Claims 14, 25, 31 and 36 are independent claims.

Rejection Under 35 U.S.C. § 102(e) of Claims 14-37

The Examiner rejects **claims 14-37** under 35 U.S.C. § 102(e) as anticipated by Call (U.S. 6,418,441, filed July 2000, priority filed on May 21, 1999) in view of Ra et al. "A Transparent Schema-Evolution System Based on Object-Oriented View Technology", July/August 1997, pp.600-624.

Claim 25

Claim 25 includes the limitations:

means for defining a first tag, including a plurality of elements from a markup language, in a first schema in the computer network system;

means for polymorphically extending a definition of the first tag by use of a second schema residing on the computer network system, the second schema defining a second tag by reference to the first tag that incorporates in the second schema the plurality of

elements from the markup language and by including additional elements;

means for importing the second schema into the document instance.

These limitations are not found in Call in view of Ra et al.

This claim has been amended to emphasize the polymorphic use of extension that is explained at length in the application, particularly at pp. 13-16 ("D. Enhanced XML and Polymorphic Schemas"). The notion of "extensibility" in Call does not describe polymorphism. The amended language should be allowable over Call.

The Examiner's new rejection (OA 4-5) follows the required protocol for rejection of a means-plus-function claim, as set out in MPEP §§ 2181-83, at 2100-227 *et seq.* (Rev. 5, Aug. 2006), except that it gives the Examiner's view of the structures described by the claims, but without any reference to passages of the application that actually describe structures. Some slippage has resulted. The Examiner has failed to properly identify the structures that correspond to the means for extending.

The structures corresponding to "means for extending" are presented on pp. 13-16 of the application. The structures corresponding to structure includes the "extends" statement in the example on pp. 14-15. See, FIG. 2, ref 204. The "extends" structure is not a feature of DTD definition files and does not appear anywhere in Call. <u>This is a second basis for allowing claim 25 over Call.</u>

The structures corresponding to "means for importing" include URNs, URIs and URLs directly or indirectly specified in an XML document, as illustrated on pp. 22-25. See, FIG. 2, ref 212, 214. The Examiner concedes that Call does not include means for importing the second schema into the document instance. (This is important for claim 1, as well, which specifies a strategy for directing the recipient of a document to the second schema. Call does not include means for importing <u>or</u> referencing the second schema in the document instance.)

The combination of Call and Ra does not teach a modification of RDF that includes a means for importing the second schema because Call uses databases for a different purpose than using RDF. The view schema concept in Ra would apply to Call's databases, not to an RDF semantic web implemented in XML code. We reproduce RA's FIG. 1 below:
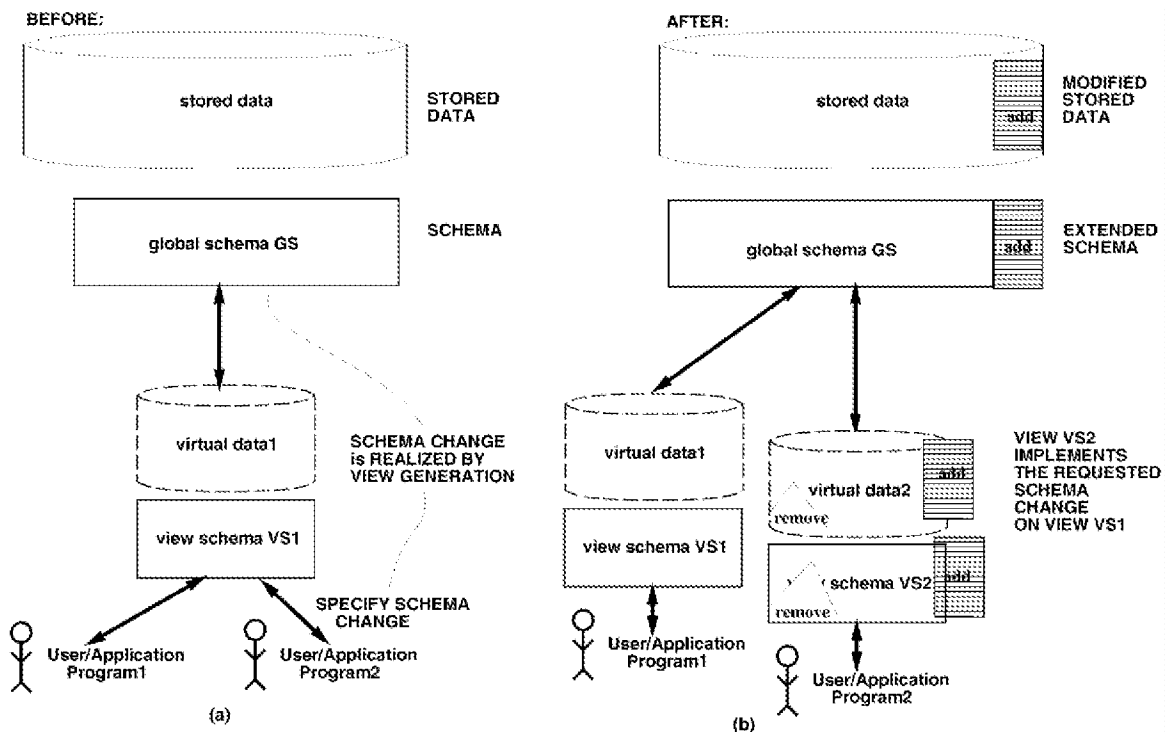
This figure depicts two <u>view schemas</u> for a database and allows the newer view schema to add to the database, which be visible only later the newer view schema. View schemas are unique to databases; view schemas do not apply to single XML documents. <u>View schemas</u> do not provide the claimed "means for importing the second schema into the document instance."

Combining Call and Ra might modify Call's inventory database (FIG. 2, ref 500) to use Ra's <u>view schemas</u>, but would have no impact on use of RDF (Call col. 25). Call is not at all clear why RDF is mentioned. As we read Call, the existence of an RDF semantic web prepared in some way that Call does not describe and for purposes that are vague, can be combined with using UPC codes for indexing. (Col. 25, line 27) Ra says nothing that would be interesting for enhancing the combination of UPC codes with RDF. <u>This is a third reason to withdraw the rejection.</u>

Should the Examiner persist, we need a clear description of what she has in mind for modifying Call use of RDF with Ra's view schema. Would the combination look more like a horse or camel? What does the Examiner mean when she says, "the combination would have provided the capability for transferring requests for specific information to preferred sources of that information on the Internet"? How does a <u>view schema</u> have the effect on Call that the Examiner touts?

Therefore, claim 25 should be allowable over Call in view of Ra et al.

<u>Claim 26</u>

Claim 26 includes the limitations:

The computer network system of claim 25, wherein the markup language is XML.

These limitations are not found in Call in view of Ra et al.

Combining <u>view schemas</u> with Call's use of XML to implement RDF makes no sense for the reasons described above. The rationale, "Call teaches the markup language … XML" (OA 6), says nothing about what it would mean to combine <u>view schemas</u> with XML.

Therefore, claim 26 should be allowable over Call in view of Ra et al.

<u>Claim 30</u>

Claim 30 includes the limitations:

means for using an extension of the first tag, wherein the extension of the

first tag is used in a location reserved for the first tag in the document instance.

These limitations are not found in Call in view of Ra et al.

The quoted words "shareability and extensibility" do not say that the first tag extension can be used in a location reserved for the first tag. The <u>structure</u> taught in the specification allows the XML element <ContactAddress> to be used in place of the element <Address>. <u>Neither Call nor Ra describe this structure or anything that the Examiner argues is equivalent.</u>

Therefore, claim 30 should be allowable over Call in view of Ra et al.

<u>Claim 14</u>

Claim 14 includes the limitations:

defining the first tag in a first schema, wherein the definition of the first tag includes a plurality of elements from the markup language;

defining a second tag in a second schema, wherein a definition of the second tag includes

> *a reference to the first tag that identifies the first tag as being extended; and*

> *an additional element from the markup language;*

providing references for locating the first schema and second schema in the first electronic document, wherein the second tag is polymorphically used to encode text within the first electronic document, whereby the first and second schemas respectively allow use of the first or second tag.

These limitations are not found in Call in view of Ra et al.

This claim has been amended to emphasize the polymorphic use of extension that is explained at length in the application, particularly at pp. 13-16 ("D. Enhanced XML and Polymorphic Schemas"). The notion of "extensibility" in Call does not describe polymorphism. Merely describing something as "sharable and extensible" is not enough to read on polymorphism. Review of the extensive documentation that we have provided regarding RDF makes it clear that RDF does not support polymorphism. <u>The amended language should be allowable over Call.</u>

The combination of XLinks and RDF (OA 7-8) that the Examiner suggests is not described by Call. XLinks is described in col. 24. XLinks allow a programmer to create linked lists, trees or other data structures in which nodes are XML documents,

according to Call col. 24, lines 50-65. Call's description of XLinks ends in col. 24, at least twenty lines before discussion of RDF begins. Call uses the two software packages for different purposes in different ways with different results. The Examiner quotes extensively from descriptions of XLinks and RDF, but gives no description of how they would be combined. Again, drawing on the old joke of a camel being a horse designed by a committee, we ask whether a functional combination of XLinks with RDF would look like a camel or a horse? The Examiner's quotations from Call present an aggregation of unrelated concepts, not a description of combining software components as claimed. An aggregation of concepts is not a combination that supports a section 103 rejection.

We submit that no combination of XLinks with RDF would read on this claim. An XLink is a way of building linked lists, which is a different software concept than providing a locator for a schema used to validate an XML document. Introducing XLinks for its intended purpose to link together instances of semantic information stored in XML/RDF documents would make it easier to walk through a set of RDF document instances, but would not impact schemas used to validate RDF documents. Therefore, combination (instead of aggregation) of XLink and RDF would not read on this claim.

Therefore, claim 14 should be allowable over Call in view of Ra et al.

Claims 15 & 17

Claims 15 and 17 should be allowable over Call in view of Ra et al. for at least the same reasons as claim 14, from which they depend.

Claim 18

Claim 18 includes the limitations:

The method of claim 17, wherein the first document corresponds to at least one of a purchase order, a purchase order acknowledgement, an order status check, an availability check, a price check, an invoice, an invoice acknowledgement.

These limitations are not found in Call in view of Ra et al.

Call uses RDF for catalog information, for the descriptive information that can be stored in a semantic web. Col. 25. "Basic information about products" is catalog-like semantic web information, not one of the documents identified in this claim. (The Examiner's assertion (OA at 10) that Call mentions purchase orders is unrelated to

RDF.) <u>Because Call does not combine RDF with any of the enumerated documents and</u> <u>RDF is not an appropriate means for expressing these documents, claim 18 should be</u> <u>allowed.</u>

Therefore, claim 18 should be allowable over Call in view of Ra et al.

<u>Claim 20</u>

Claim 20 includes the limitations:

The method of claim 14, further comprising:

accessing the second schema in a second electronic document, wherein the second tag is used to encode the second electronic document.

These limitations are not found in Call in view of Ra et al.

Amendment of claim 14 emphasizes that this claim involves an exercise of polymorphism, which Call does not describe.

Therefore, claim 20 should be allowable over Call in view of Ra et al.

<u>Claims 21-22</u>

Claims 21-22 should be allowable over Call in view of Ra et al. for at least the same reasons as the claim from which they depend.

<u>Claims 23-24 and 32-34</u>

Claims 23-24 include the limitations:

The method of claim 22, wherein the second document corresponds to a commercial transaction.

The method of claim 23, wherein the commercial transaction is selected from the group consisting of a purchase order, a purchase order acknowledgement, an order status check, an availability check, a price check, an invoice, an invoice acknowledgement.

Claims 32-34 include similar limitations. These limitations are not found in Call in view of Ra et al.

Call uses RDF for catalog information, for the descriptive information that can be stored in a semantic web. Col. 25. "Basic information about products" is catalog-like semantic web information, not a commercial transaction and definitely not one of the documents identified in this claim. (The Examiner's assertion (OA at 10) that Call mentions purchase orders is unrelated to RDF.) <u>Because Call does not combine RDF</u> <u>with any of the enumerated documents and RDF is not an appropriate means for</u> <u>expressing these documents, claims 23-24 and 32-34 should be allowed.</u>

Claim 31

    Claim 31 includes the limitations:

    *accessing a first schema from a second server in the plurality of servers,
wherein the first schema defines one or more elements used in a document
instance to encode text;*

    *accessing a second schema from a third server in the plurality of servers,
wherein the second schema extends at least one element from the one or
more elements used in the document instance by defining a new element
that refers to and includes the at least one element and further includes at
least one additional element.*

These limitations are not found in Call in view of Ra et al.

    The combination of Call and Ra does not teach a modification of RDF that
includes accessing two schemas from different servers for a single instance of an XML
document, for instance, to validate the XML instance. Call admittedly does not teach the
limitations of this claim. Ra's <u>view schema</u> might be apply to Call's databases, as
discussed above, but the word "server" does not appear on pages 602-03 of Ra and
nothing in Ra's FIG. 1 (reproduced above) describes the same thing as the limitations of
claim 31.

    Ra's figure depicts two <u>view schemas</u> for a database and allows the newer view
schema to add to the database, which be visible only later the newer view schema. The
figure does depicts the <u>view schemas</u> as virtual and the text explains that they are
incorporated into the global schema. <u>The figure does not require or describe breaking
the global schema into parts that would reside on different servers.</u>

    Should the Examiner persist, we need a clear description of what she has in
mind for modifying Call use of RDF with Ra's view schema. What does the Examiner
mean when she says, "the combination would have provided the capability for
transferring requests for specific information to preferred sources of that information on
the Internet"? How does Ra's <u>view schema</u> teach anything about distributing schemas
used to validate a single XML document instance across multiple servers?

    Therefore, claim 31 should be allowable over Call in view of Ra et al.

Claim 32

    Claim 32 includes the limitations:

    *The method of claim 31, wherein the computer network system is used to
conduct a commercial transaction between two or more trading partners.*

These limitations are not found in Call in view of Ra et al.

Therefore, claim 32 should be allowable over Call in view of Ra et al.

Claim 35

Claim 35 should be allowable over Call in view of Ra et al. for at leas the same reasons as claim 31 from which it depends.

Claim 36

Claim 36 includes the limitations:

defining the first tag in a first schema;

defining a second tag in a second schema, wherein a definition of the second tag includes a reference to the first tag and an additional tag from the markup language;

providing references for locating the first schema and second schema in the first electronic document, wherein the first and second tags are polymorphically available to encode text within the first electronic document;

whereby an application designed to work with the first tag can process the text encoded using the second tag, when the encoding is within the scope of the first tag, without modifying the application, whereby document types and applications can evolve separately.

These limitations are not found in Call in view of Ra et al.

Like at least some of the prior claims, this claim has been amended to emphasize polymorphic extension using a second schema. <u>Because neither Call nor Ra describes polymorphic behavior, this claim should be allowed.</u>

We further call to the Examiner's attention the final element. While the Examiner says that Call reads on this, <u>none of the words in the extensive quotation (OA 15-16) have anything to do with this particular method of allowing document types and applications to evolve separately. For this additional reason, the claim should be allowed over the art of record.</u>

Therefore, claim 36 should be allowable over Call in view of Ra et al.

Claim 37

Claim 37 includes the limitations:

The method of claim 36, wherein the first and second schemas reside on separate servers.

These limitations are not found in Call in view of Ra et al.

Claim 37 should be allowable over Call in view of Ra et al. for the same reasons as claim 36 from which it depends and claim 31, which also mentions distribution of multiple schemas across multiple servers.

Applicants respectfully submit that claims 14-37 should be allowable over Call in view of Ra et al.

CONCLUSION

Applicants respectfully submit that the pending claims are now in condition for allowance and thereby solicit acceptance of the claims as now stated.

Applicants would welcome an interview, if the Examiner is so inclined. The undersigned can ordinarily be reached at his office at (650) 712-0340 from 8:30 a.m. to 5:30 p.m. PST, Monday through Friday, and can be reached at his cell phone at (415) 902-6112 most other times.

Fee Authorization. The Commissioner is hereby authorized to charge underpayment of any additional fees or credit any overpayment associated with this communication to Deposit Account No. 50-0869 (OIN 1012-1).

Respectfully submitted,

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